Scientific & Technical Information Center
USPTO

STIC Search Report
EIC 2100

STIC Database Tracking Number: 114436

TO:	From:
Viet Vu Location: Art Unit : 2154 Tuesday, February 17, 2004 Case Serial Number: 09326258	Geoffrey St. Leger Location: EIC 2100 PK2-4B30 Phone: 308-7800 geoffrey.stleger@uspto.gov

Search Notes

Dear Examiner Vu,

Attached please find the results of your search request for application 09326258. I searched Dialog's NPL database along with the Internet.

Please let me know if you have any questions.

Regards,

Geoffrey St. Leger
4B30/308-7800

sira
Search and Information Resources Administration

STIC EIC 2100 Search Request Form

114436

Today's Date: 2/17/04

What date would you like to use to limit the search?
Priority Date: 3/1996 Other:

Name Viet Vu

AU 2154 Examiner # 71525

Room # 5A19 Phone 305 9597

Serial # 09/376,258

Format for Search Results (Circle One):
PAPER DISK EMAIL

Where have you searched so far?
USP DWPI EPO JPO ACM IBM TDB
IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) YES NO
A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.

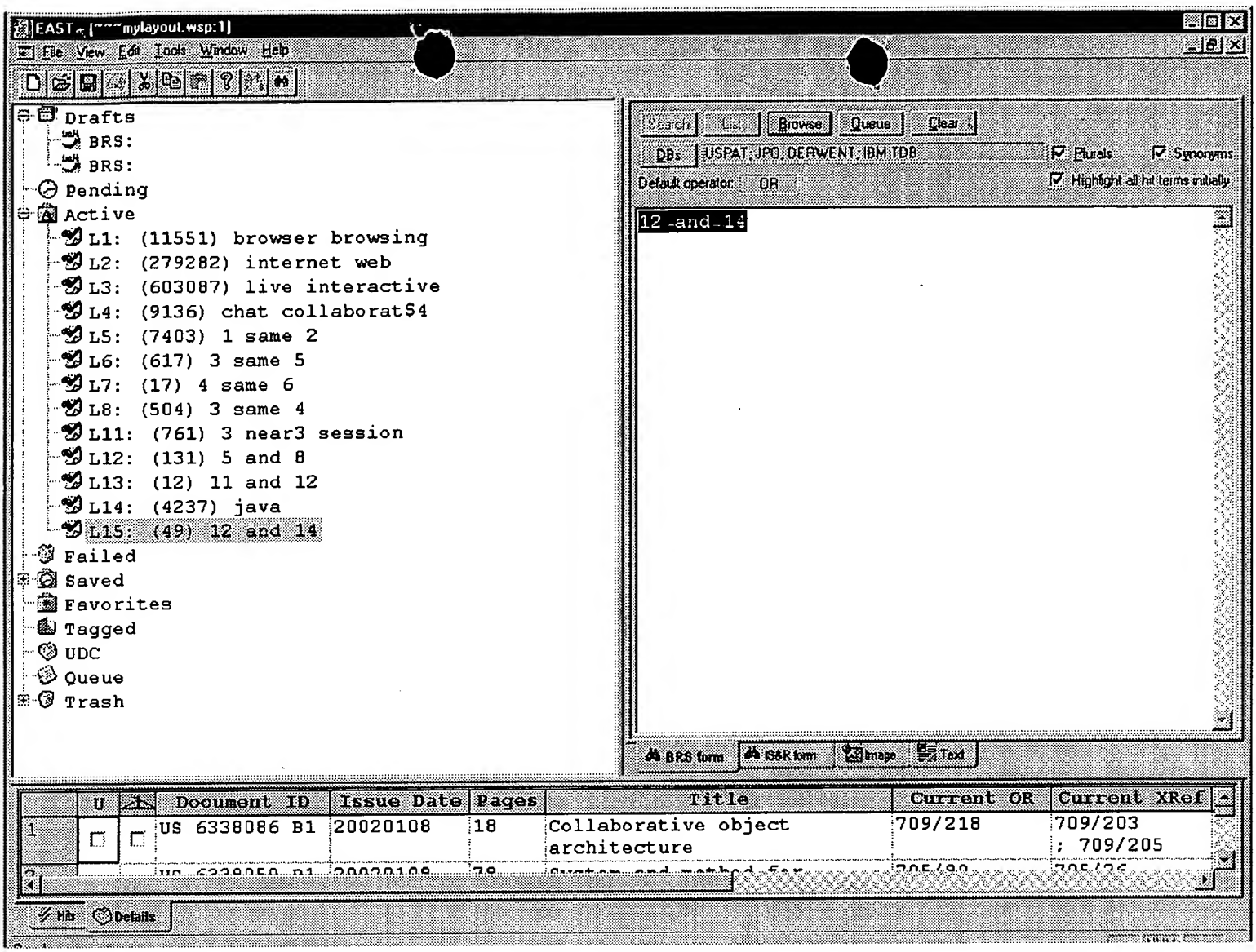
What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

web browser with integrated chat function capable of providing shared browsing.

STIC Searcher Geoffrey St. Leger Phone 308-7800
Date picked up 2/17/4 Date Completed 2/17/4

L Number	Hits	Search Text	DB	Time stamp
1	9725	java	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:47
2	5648	applet plugin (plug adj in)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:48
3	2787	java same (applet plugin (plug adj in))	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:48
4	4057	chat chatting	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:48
5	186	(java same (applet plugin (plug adj in))) and (chat chatting)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:48
6	21	(java same (applet plugin (plug adj in))) same (chat chatting)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:49
7	10	@ay<=1996 and ((java same (applet plugin (plug adj in))) and (chat chatting))	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:53
8	18939	(web internet) same brows$3	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:53
9	1295	(java same (applet plugin (plug adj in))) same ((web internet) same brows$3)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 12:53
10	125	@ay<=1996 and ((java same (applet plugin (plug adj in))) same ((web internet) same brows$3))	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 13:01
11	1	@ay<1996 and java and (chat chatting) and ((web internet) same brows$3)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 13:02
12	1	@ay<1996 and java and (chat chatting)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 13:03
13	23	@ay<1996 and java and ((web internet) same brows$3)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 13:11
14	52	java same (chat chatting)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 13:14
15	52	(applet plugin (plug adj in)) same (chat chatting)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 13:14

L Number	Hits	Search Text	DB	Time stamp
3	12770	(web internet) near2 browser	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 08:58
4	991	@ay<=1996 and ((web internet) near2 browser)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 09:05
5	0	@ad<=03011996 and ((web internet) near2 browser)	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 09:05
6	3437	chat	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 09:05
7	49	(@ay<=1996 and ((web internet) near2 browser)) and chat	USPAT; JPO; DERWENT; IBM_TDB	2004/02/17 09:05


EAST [~~~mylayout.wsp:1]
File View Edit Tools Window Help
Drafts
BRS:
BRS:
Pending
Active
L1: (11551) browser browsing
L2: (279282) internet web
L3: (603087) live interactive
L4: (9136) chat collaborat$4
L5: (7403) 1 same 2
L6: (617) 3 same 5
L7: (17) 4 same 6
L8: (504) 3 same 4
L11: (761) 3 near3 session
L12: (131) 5 and 8
L13: (12) 11 and 12
L14: (4237) java
L15: (49) 12 and 14
Failed
Saved
Favorites
Tagged
UDC
Queue
Trash
Search
List
Browse
Queue
Clear
DBs
USPAT; JPO; DERWENT; IBM_TDB
Plurals
Synonyms
Default operator:
OR
Highlight all hit terms initially
12 and 14
BRS form
ISR form
Image
Text
U
Document ID
Issue Date
Pages
Title
Current OR
Current XRef
1
US 6338086 B1
20020108
18
Collaborative object architecture
709/218
709/203 ; 709/205
Hits
Details

File 275:Gale Group Compu[redacted] DB(TM) 1983-2004/Feb 16
(c) 2004 The Gale Group
File 47:Gale Group Magazine DB(TM) 1959-2004/Feb 13
(c) 2004 The Gale group
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Feb 16
(c) 2004 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2004/Feb 16
(c) 2004 The Gale Group
File 16:Gale Group PROMT(R) 1990-2004/Feb 16
(c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2004/Feb 16
(c)2004 The Gale Group
File 624:McGraw-Hill Publications 1985-2004/Feb 16
(c) 2004 McGraw-Hill Co. Inc
File 98:General Sci Abs/Full-Text 1984-2004/Jan
(c) 2004 The HW Wilson Co.
File 553:Wilson Bus. Abs. FullText 1982-2004/Jan
(c) 2004 The HW Wilson Co
File 88:Gale Group Business A.R.T.S. 1976-2004/Feb 17
(c) 2004 The Gale Group
File 15:ABI/Inform(R) 1971-2004/Feb 17
(c) 2004 ProQuest Info&Learning
File 635:Business Dateline(R) 1985-2004/Feb 14
(c) 2004 ProQuest Info&Learning
File 9:Business & Industry(R) Jul/1994-2004/Feb 13
(c) 2004 Resp. DB Svcs.
File 810:Business Wire 1986-1999/Feb 28
(c) 1999 Business Wire
File 647:CMP Computer Fulltext 1988-2004/Feb W2
(c) 2004 CMP Media, LLC
File 674:Computer News Fulltext 1989-2004/Feb W2
(c) 2004 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2004/Feb 16
(c) 2004 The Dialog Corp.
File 369:New Scientist 1994-2004/Feb W2
(c) 2004 Reed Business Information Ltd.
File 813:PR Newswire 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc
File 634:San Jose Mercury Jun 1985-2004/Feb 14
(c) 2004 San Jose Mercury News
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
File 20:Dialog Global Reporter 1997-2004/Feb 17
(c) 2004 The Dialog Corp.
File 613:PR Newswire 1999-2004/Feb 17
(c) 2004 PR Newswire Association Inc
File 610:Business Wire 1999-2004/Feb 17
(c) 2004 Business Wire.

Set	Items	Description
S1	4452	(COLLABORATIVE OR SHARED)(3W)BROWS??? OR COBROWS??? OR CO(-)BROWS???
S2	47	S1 NOT PY=1997:2004
S3	28	RD (unique items)
S4	144	SAMEPAGE(30N)WEBFLOW
S5	123	S4 NOT PY=1997:2004
S6	66	RD S5 (unique items)
S7	30	(COOPERATIV? OR CO()OPERATIV?)(3W)BROWS???
S8	13	RD (unique items)
S9	7	S8 NOT PY=1997:2004

3/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

02002095 SUPPLIER NUMBER: 18838910 (USE FORMAT 7 OR 9 FOR FULL TEXT)
VocalTec extends collaboration; conferencing tool takes different approach from NetMeeting, others when it comes to sharing apps. (Internet Conference Professional 2.0 workgroup software) (Software Review) (Evaluation)
Kramer, Matt
PC Week, v13, n44, p89(1)
Nov 4, 1996
DOCUMENT TYPE: Evaluation ISSN: 0740-1604 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 567 LINE COUNT: 00053

... the file-transfer and drawing tools found in the previous release, Version 2.0 provides **collaborative** World Wide Web **browsing** using a built-in Web browser that permits all conference participants to simultaneously view the...

3/3,K/2 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

02000715 SUPPLIER NUMBER: 18768619 (USE FORMAT 7 OR 9 FOR FULL TEXT)
NT workgroups and domains. (Windows NT Server 4.0 NOS) (Software Review) (Evaluation)
Yager, Tom
UNIX Review, v14, n12, p39(6)
Nov, 1996
DOCUMENT TYPE: Evaluation ISSN: 0742-3136 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3071 LINE COUNT: 00234

... system" tool quickly located all the systems and correctly reported them as part of the **shared** domain. Except for **browsing** , I was able to configure and sample all the services the domain offers.
Stable At...

3/3,K/3 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01993764 SUPPLIER NUMBER: 18783595 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Netscape steers Navigator into Communicator suite. (Netscape Communicator to include Navigator 4.0, a conferencing tool, HTML editor, other applications) (Product Development)
Pearlstein, Joanna
MacWEEK, v10, n40, p1(3)
Oct 21, 1996
ISSN: 0892-8118 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 602 LINE COUNT: 00052

... tool, but it will also offer tools for sharing documents, exchanging files, sketching ideas and **collaborative** Web **browsing** . Based in part on the new H.323 standard, Conference will provide Internet phone capability...

3/3,K/4 (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01951167 SUPPLIER NUMBER: 18418825 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Cutting through the telebaloney. (development of Internet telephony

technology)(PC Week Network) (Internet/Web/Online Service Information)(Column)
[illegible], Dave
PC Week, v13, n25, pN3(3)
June 24, 1996
DOCUMENT TYPE: Column ISSN: 0740-1604 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1516 LINE COUNT: 00132

... Furthermore, these frameworks integrate audio conferencing with other components of multimedia conferencing, including videoconferencing and **shared** whiteboards.
Browser vendors are also wrapping telephony functions into their products. Quarterdeck Corp.'s WebTalk is a...

3/3,K/5 (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01910006 SUPPLIER NUMBER: 18032638 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Interactive multimedia. (educational technology) (Technology Information)(Editorial)
[illegible], Sylvia
[illegible] Journal (Technological Horizons In Education), v23, n7, p6(1)
[illegible]
DOCUMENT TYPE: Editorial ISSN: 0192-592X LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1486 LINE COUNT: 00127

... in a desktop videoconference, during which a PC application, video clip or document can be **shared** , as well as **browse** the Internet --simultaneously. Oracle Corp. plans an early-in-the-year release of software that...

3/3,K/6 (Item 6 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01888656 SUPPLIER NUMBER: 17956842 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Is the Internet an application development revolution? Can the Web become the dominant operating platform? (Technology Information)(Editorial)
Hawkins, John L.
Data Based Advisor, v14, n1, p8(1)
Jan, 1996
DOCUMENT TYPE: Editorial ISSN: 0740-5200 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 1017 LINE COUNT: 00082

... In a recent conversation, Mike Zisman, the new CEO of the Lotus [illegible] of IBM, **shared** this vision: "The **browser** is going to be so [illegible] there won't be a browser--it will be...

3/3,K/7 (Item 7 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01843733 SUPPLIER NUMBER: 17529355 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Integra tool offers head start in developing client/server programs. (Integra Technology International's Business Application Builder 3.0 development package) (Software Review)(Evaluation)
Coffee, Peter
PC Week, v12, n39, p91(2)
Oct 2, 1995
DOCUMENT TYPE: Evaluation ISSN: 0740-1604 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract

WORD COUNT: 778 LINE COUNT: 00068

... sheet in the package, advising developers to close all other applications to permit updating of **shared** files. However, even **browsing** the installation disk (instead of simply typing A:\SETUP) led to an aborted installation because...

3/3,K/8 **(Item 8 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01836863 SUPPLIER NUMBER: 17393219 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Networking OS/2. (Artisoft's LANtastic for OS/2 network management software) (includes a related article summarizing the review) (Software Review) (Evaluation)
Holtz, Kevin
LAN Magazine, v10, n8, p154(5)
August, 1995
DOCUMENT TYPE: Evaluation ISSN: 1069-5621 LANGUAGE: English
REPORT TYPE: Fulltext; Abstract
WORD COUNT: 3516 LINE COUNT: 00286

... log in (if user names and passwords are required), and you may then browse the **shared** resources as desired. **Browsing** is nice, especially if you're not sure exactly where the file or application you...

3/3,K/9 **(Item 9 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01817337 SUPPLIER NUMBER: 17389592 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Gains in peer networking bring muscle to the mix. (PC Week Netweek)
Chernicoff, David P.
PC Week, v12, n30, pN1(2)
July 31, 1995
ISSN: 0740-1604 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 601 LINE COUNT: 00054

... operating systems except OS/2 Warp. Warp allowed us to explicitly connect to a known **shared** drive, but its **browser** did not recognize the Windows NT Server that was providing shares on the network. The...

3/3,K/10 **(Item 10 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01775079 SUPPLIER NUMBER: 16778696 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Sedona room: online tours and 3D spaces. (PC Forum)
RELease 1.0, v95, n2, p42(3)
Feb 23, 1995
ISSN: 1047-935X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 1267 LINE COUNT: 00104

... On the content front, Pesce is involved in projects of the types he wants. A **collaborative** "community **browser** " project should lead to a 3D walkthrough of the South of Market section of San...

3/3,K/11 **(Item 11 from file: 275)**
DIALOG(R)File 275:Gale Group Computer DB(TM)
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01768463 SUPPLIER NUMBER: 15332112 (USE FORMAT 7 OR 9 FOR FULL TEXT)
IDE announces StP/OMT and integrated CDE. (Interactive Development Environments Inc's Software through Pictures/Object Modeling Technique

tools and C Development Environment) (New Products) (Brief Article) (Product Announcement)
Dr. Dobb's Journal, v12, n5, p109(1)
May, 1994
DOCUMENT TYPE: Product Announcement ISSN: 0898-9788 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 382 LINE COUNT: 00034

... updates to either on a per-item or global basis; query the Software through Pictures **shared** repository; **browse** in either direction between the Structure Chart Editor and Static Sourcebrowser, or their SPARCworks tools...

3/3,K/12 (Item 12 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01255363 SUPPLIER NUMBER: 07037691 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Database research-is there life beyond? (University of California, Berkeley, research on object-oriented data base management)
Dr. Dobb's Journal of Software Tools, v13, n7, p44(2)
July, 1988
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 799 LINE COUNT: 00064

... oriented forms system for building user interfaces that allows arbitrary nesting of field types. A **shared** -object **browser** , which allows programmers to browse through stored objects, is also being developed, along with a...

3/3,K/13 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2004 The Gale group. All rts. reserv.

04546363 SUPPLIER NUMBER: 18512922 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Best Web browser. (includes related article on browsers other than Netscape Navigator and Microsoft Internet Explorer, where to get browsers) (Internet Survival Guide) (Software Review) (Evaluation)
PC World, v14, n8, p136(7)
August, 1996
DOCUMENT TYPE: Evaluation ISSN: 0737-8939 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3952 LINE COUNT: 00316

... Explorer is free and comes with Windows 95; Navigator costs only $49.

But beyond these **shared** characteristics, the two **browsers** are waging a war of enhancements, proprietary extensions, and me-too compatibility not likely to...

3/3,K/14 (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2004 The Gale Group. All rts. reserv.

04 Supplier Number: 46343415 (USE FORMAT 7 FOR FULLTEXT)
WEBFLOW ANNOUNCES FIRST WORKGROUP APPLICATION DESIGNED FOR CORPORATE INTRANETS
PR Newswire, p0430SFTU004
April 30, 1996
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1735

Collaborative Workspace via Web **Browsers** , Automates Action Item Management

SANTA CLARA, Calif., April 30 /PRNewswire/ -- WebFlow(R) Corporation today announced...

3/3,K/15 (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2004 The Gale Group. All rts. reserv.

01368499 Supplier Number: 46301380 (USE FORMAT 7 FOR FULLTEXT)
Attachmate's OpenMind wins Network Computing's "Editor's Choice" for enterprise-wide conferencing systems.
Business Wire, p4151063
April 15, 1996
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 803

... a 'webified' version of this award-winning product, which will dramatically extend the simplicity of **collaborative** features with Internet **browsers** . The full text of the article as well as additional information and demonstrations can...

3/3,K/16 (Item 3 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)
(c) 2004 The Gale Group. All rts. reserv.

01283021 Supplier Number: 45328618 (USE FORMAT 7 FOR FULLTEXT)
ORACLE BOOK EXPANDS ONLINE MULTIMEDIA DOCUMENT PUBLISHING POWER WITH NEW INTERNET ACCESS
PR Newswire, pN/A
Feb 10, 1995
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 546

... are preserved, so users can return to any previously visited subjects. Readers can also personalize **shared** documents for faster **browsing** -- adding bookmarks, hypertext links and annotations (text, image or voice). Oracle Book documents are fully...

3/3,K/17 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

01368499 Supplier Number: 46864248 (USE FORMAT 7 FOR FULLTEXT)
Conferencing tool takes different approach from NetMeeting, others when it comes to sharing apps
PC Week, p089
Nov 4, 1996
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 540

... the file-transfer and drawing tools found in the previous release, Version 2.0 provides **collaborative** World Wide Web **browsing** using a built-in Web browser that permits all conference participants to simultaneously view the...

3/3,K/18 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

04422435 Supplier Number: 46488390 (USE FORMAT 7 FOR FULLTEXT)

Cutting through the telebabble ley
PC Week, pN03
June 24, 1996
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 1427

... Furthermore, these frameworks integrate audio conferencing with other components of multimedia conferencing, including videoconferencing and **shared** whiteboards.
Browser vendors are also wrapping telephony functions into their products. Quarterdeck Corp.'s WebTalk is a...

3/3,K/19 **(Item 3 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

04015776 Supplier Number: 45834661 (USE FORMAT 7 FOR FULLTEXT)
Integra tool offers head start in developing client/server programs
PC Week, p91
Oct 2, 1995
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 720

... sheet in the package, advising developers to close all other applications to permit updating of **shared** files. However, even **browsing** the installation disk (instead of simply typing A: SETUP) led to an aborted installation because...

3/3,K/20 **(Item 4 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)
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03964796 Supplier Number: 45748605
Quarterdeck moves to catch the next wave
Government Computer News, p26
August 28, 1995
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Tabloid; Trade

ABSTRACT:
...utilities to include Internet tools and remote computing software. Presently, Quarterdeck is involved in creating **collaborative** , **browser** , and authoring software for use on the World Wide Web (WWW). Quarterdeck products support two...

3/3,K/21 **(Item 5 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.

03539696 Supplier Number: 44967009 (USE FORMAT 7 FOR FULLTEXT)
Daytona Races Toward The Fortune 500
Network Computing, p46
Sept 1, 1994
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 845

... shared resources on the server, much as an NT disk drive or subdirectory might be **shared** . Clients **browsing** the server will see these NetWare shares and can connect or print to them. With...

3/3,K/22 **(Item 1 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

09022427 SUPPLIER NUMBER: 18756979 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Internet seen as potential design platform. (open standards and platform-independent software could act as enabling technologies) (Internet/Web/Online Service Information)
Brown, Chappell
Electronic Engineering Times, n922, p87(2)
Oct 7, 1996
ISSN: 0192-1541 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 2463 LINE COUNT: 00199

...ABSTRACT: Web site. The software is intended to make hardware/software co-design easier and support **collaborative** work with a **browser** interface. Stanford University's Center for Design Research has created a Java Agent Template system...

3/3,K/23 **(Item 2 from file: 148)**
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

[illegible] SUPPLIER NUMBER: 14038576 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Exec VP Horovitz on tagging, configurations & the changing environs of retail. (National Assn. of Recording Merchandisers Exec. VP Pam Horowitz) (NARM '93: Music is Magic in Tropical Orlando) (Interview)
Verna, Paul
Billboard, v105, n11, p100(2)
March 13, 1993
DOCUMENT TYPE: Interview ISSN: 0006-2510 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 983 LINE COUNT: 00075

... not accommodate. "I don't know how you do an electronic autograph section, an electronic **shared** experience of **browsing** and shopping," she says. "Electronic browsing is just not the same as being there, having...

3/3,K/24 **(Item 1 from file: 624)**
DIALOG(R)File 624:McGraw-Hill Publications
(c) 2004 McGraw-Hill Co. Inc. All rts. reserv.

00767158
INFOSEEK and FLIP
S&P's Emerging & Special Situations May 31, 1996; Pg 3; New Issues Supplement
Journal Code: ESS ISSN: 0882-5440
Section Heading: NEW AND NOTEWORTHY
Word Count: 844 *Full text available in Formats 5, 7 and 9*

[illegible]
...less than $0.01 by year end. In addition, these revenues will have to be **shared** with **browser** and other web sites with the power to direct traffic elsewhere.
The bottom line is...

3/3,K/25 **(Item 1 from file: 15)**
DIALOG(R)File 15:ABI/Inform(R)
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01291308 99-40704
VRML ventures into engineering
Beazley, William G; Chapman, John B
Computer-aided Engineering v15n9 PP: 55-56 Sep 1996
ISSN: 0733-3536 JRNL CODE: CAE
WORD COUNT: 1427

...ABSTRACT: models and engineering data on the Web. The result is a powerful new tool for **collaborative** engineering. Easy-to- **browse** models, plus the low cost of software supporting VRML, is causing engineering firms, their clients...

3/3,K/26 (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
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01097815 97-47209
The politics of electronic commerce
Dunlap, Charlotte
Computer Reseller News n648 PP: 1, 234 Sep 11, 1995
ISSN: 0893-8377 JRNL CODE: CRN
WORD COUNT: 1221

...TEXT: electronic commerce involves putting clients' wares up on a Web server and enabling Web customers **Co browse** through merchandise and place orders. After an order has been placed, an automatic attendant calls ...

3/3,K/27 (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)
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00681832 93-31053
DCE migration made easier by development plan
Horwitt, Elisabeth
Computerworld v27n11 PP: 8 Mar 15, 1993
ISSN: 0010-4841 JRNL CODE: COW
WORD COUNT: 556

...TEXT: deforestation modeling, ozone depletion and climate change.

Project planners said they hope to have a " **collaborative** data **browser** " up and running by November that will use DCE's remote procedure call to let ...

3/3,K/28 (Item 1 from file: 635)
DIALOG(R)File 635:Business Dateline(R)
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0668683 95-24397
Oracle Book expands online multimedia document publishing power with new Internet access
Smith, Eve Kowtko
PR Newswire (New York, NY, US) s1 p1
PUBL DATE: 950207
WORD COUNT: 553
DATELINE: San Francisco, CA, US

TEXT:

...are preserved, so users can return to any previously visited subjects. Readers can also personalize **shared** documents for faster **browsing** -- adding bookmarks, hypertext links and annotations (text, image or voice).

02002095 SUPPLIER NUMBER: 18838910 (THIS IS THE FULL TEXT)

VocalTec extends collaboration; conferencing tool takes different approach from NetMeeting, others when it comes to sharing apps. (Internet Conference Professional 2.0 workgroup software) (Software Review) (Evaluation)

Kramer, Matt

PC Week, v13, n44, p89(1)
Nov 4, 1996
DOCUMENT TYPE: Evaluation ISSN: 0740-1604 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract
WORD COUNT: 567 LINE COUNT: 00053

ABSTRACT: VocalTec's $149 Internet Conference Professional 2.0 is a general conferencing application that offers collaborative word processing, spreadsheet and presentation tools. This version features a greatly improved user interface and a whiteboard for freehand drawing. Internet Phone features facilitate audio communications between Internet users. A built-in Web browser enables conference participants to simultaneously view a Web page. OLE-based collaborative editing capabilities provide thorough audit-trail features. Objects in OLE server applications can be placed into Internet Conference sessions. The software tracks annotations entered by conference participants and stores them in a separate layer, making it easy to remove particular annotations. Each conference is summarized, including the number of white pages used and a listing of the actions or decisions made during the conference.

TEXT:

VocalTec Inc.'s Internet Conference Professional 2.0 takes a different approach from conference tools such as NetMeeting, specializing in group document preparation rather than general conferencing.

This tack is best-suited to organizations seeking collaborative tools for word processing, spreadsheets and presentations.

In Version 2.0, this Windows tool's navigational interface is greatly improved over the previous release. All functions are easily accessible from the Internet Conference display. The Internet Conference workspace combines a multipage workbook with a whiteboard for freehand drawing. When we were working on multipage documents, it was easy to quickly move between pages in the Internet Conference workbook.

VocalTec also has incorporated Internet Phone capabilities, allowing users to exchange data and hold an audio conversation over the same Internet connection.

Besides the file-transfer and drawing tools found in the previous release, Version 2.0 provides **collaborative** World Wide Web **browsing** with a built-in Web browser that permits all conference participants to simultaneously view the same Web page.

A fair judgment

Internet Conference's $149 price may seem high, considering that Microsoft Corp. distributes NetMeeting free of charge, but Internet Conference has some useful conference management tools not found in NetMeeting and other such programs. Its OLE-based collaborative editing approach, for example, provides audit-trail capabilities that are more thorough than those provided by other programs.

Unlike others, though, Internet Conference is limited to OLE-based applications. Tools such as NetMeeting, which implement protocols from Microsoft and PictureTel Corp., can remotely share control of their local applications.

The Internet Conference tool bar includes icons for Microsoft Office applications such as Word, Excel and PowerPoint, allowing conference participants to bring up a document and have those OLE objects distributed to other conference participants. VocalTec plans to add support for additional OLE-based applications, such as Lotus SmartSuite and Corel Office Professional.

Object lessons

Objects created in applications acting as OLE servers (such as

Microsoft Word) can be placed into an Internet Conference session. If other conference participants also have the application used to create the object, they can collaboratively edit the object.

Internet Conference also keeps track of the annotations made by each conference participant. Each user's annotations are stored in a separate layer, and it is easy to remove one participant's annotations while keeping changes made by others. Layers such as these are not found in most document conferencing packages.

Internet Conference does, however, contain a summary of each conference, listing the participants, the whiteboard pages used in the conference and a note of any actions taken or decisions made during the conference.

Moving directions

VocalTec uses the same addressing scheme for both conferences and Internet phone traffic. Conference organizers create a room dedicated to a particular conference topic on an IRC (Internet Relay Chat) server run by VocalTec. Other conference attendees logging into the IRC server enter the name of the room and are connected to the conference.

Version 2.0 marks VocalTec's first introduction of a document conferencing tool since VocalTec bought Internet Conference and its developer Insitu Inc. in April. VocalTec still needs to make strides to provide interoperability with the growing number of document conferencing products, including NetMeeting, that support the T.120 data conferencing standards.

Senior Analyst Matt Kramer can be reached at matt--kramer@zd.com.

SPECIAL FEATURES: illustration; other
COMPANY NAMES: Vocaltec Inc.--Products
DESCRIPTORS: Workgroup Software; Software Single Product Review
PRODUCT/INDUSTRY NAMES: 7372690 (Communications Software NEC)
SIC CODES: 7372 Prepackaged software
TRADE NAMES: Internet Conference Professional 2.0 (Workgroup software)--Evaluation
FILE SEGMENT: CD File 275

3/9/3 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

SUPPLIER NUMBER: 18783595 (THIS IS THE FULL TEXT)

Netscape steers Navigator into Communicator suite. (Netscape Communicator to include Navigator 4.0, a conferencing tool, HTML editor, other applications) (Product Development)

Pearlstein, Joanna
MacWEEK, v10, n40, p1(3)
Oct 21, 1996
ISSN: 0892-8118 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 602 LINE COUNT: 00052

ABSTRACT: Netscape is developing its $49 Netscape Communicator suite of applications for the Internet and intranets, which will be introduced in 1st qtr 1997. Communicator will take the place of its stand-alone Navigator browser. Navigator 4.0 will be part of Communicator, which will also include a conferencing tool, an HTML editor, groupware clients and e-mail clients. A public beta of Communicator is expected in Nov 1996. Netscape Navigator 3.0 Product Manager Edith Gong indicates that Communicator will be one program, and users will move between modules using a tool bar. Communicator is expected to have a bigger RAM footprint compared to Navigator 3.0, but it will not be an exponential increase. Currently Netscape Navigator 3.0 for the Mac calls for 9MB of RAM. Industry observers contend Communicator will enable Netscape to compete more readily with Microsoft and Lotus.

TEXT:

Intranet quintet replacing browser

It's the end of Navigator as we know it, and Netscape Communications

Corp. feels fine.

The company last week turned its end-user products toward intranets and said its flagship Web browser will be incorporated into Netscape Communicator, a suite of products geared toward both intranets and the Internet.

Communicator, expected to ship in the first quarter of 1997 for $49, will comprise Navigator 4.0, an HTML editor, a conferencing tool, and e-mail and groupware clients. Navigator will no longer be available as a stand-alone browser, the company said. Netscape will sell Communicator to businesses and consumers.

Netscape Navigator 3.0 Product Manager Edith Gong said a public beta of Communicator is expected in late November. Communicator will be one application, Gong said, and users will move among modules via a tool bar.

While Communicator may have a slightly larger RAM footprint than Navigator 3.0 -- which requires 9 Mbytes of RAM on the Mac -- the increase will not be exponential, Gong said. "We'd like to do more on lowering the memory requirements on the Macintosh, especially in the home environment," she said.

Communicator's components will include:

> A browser. Navigator 4.0 will support style sheets, allowing designers to deploy a consistent look across Web pages; absolute positioning, which lets content designers specify certain locations for HTML code; and object layering. Version 4.0 will also include a revised plug-in architecture that will be backward-compatible, a security API and interface improvements, the company said (see 07.08.96, Page 1).

> E-mail. Netscape Messenger, an offline e-mail client, will support Post Office Protocol 3 and SMTP (Simple Mail Transfer Protocol). It will also handle IMAP (Internet Message Access Protocol) and Lightweight Directory Access Protocol, a protocol for centralizing e-mail directory services. Messenger will be able to send e-mail in plain text or HTML, and it will include tools for migrating mail from Lotus Development Corp.'s cc:Mail, Microsoft Mail and Qualcomm Inc.'s Eudora Pro.

> An HTML editor. Communicator will include Netscape Composer, a new version of the company's Navigator Gold. Composer will let users create Web pages containing Sun Java applets, Netscape JavaScript, styles and tables, but it will not support the creation of pages with frames or image maps.

> Groupware. Collabra, an Internet-savvy version of Netscape's groupware product, will sport an interface similar to that of Netscape Messenger. It will support discussion forums, document posting and Usenet newsgroups.

> Conferencing. Netscape Conference will borrow some functions from CoolTalk, Netscape's audio-conferencing tool, but it will also offer tools for sharing documents, exchanging files, sketching ideas and **collaborative** Web **browsing** . Based in part on the new H.323 standard, Conference will provide Internet phone capability with full-duplex audio. However, it will not be compatible with CoolTalk, which does not support H.323.

Analyst James Staten with Dataquest Inc. of San Jose, Calif., said Netscape's new suite will make it a formidable contender against Microsoft Corp. and Lotus.

"Netscape's Communicator is exactly the product they need right now," Staten said.

Staten said that even though Lotus is repositioning its Notes application to be intranet-capable, Communicator will be "a lot easier and a hell of a lot cheaper. This could be very bad news for Lotus going forward."

Netscape Communications Corp. of Mountain View, Calif., can be reached at (415) 528-2555 or (800) 638-7483; fax (415) 528-4140; http://home.netscape.com.

COMPANY NAMES: Netscape Communications Corp.--Product development
DESCRIPTORS: Software Product Development; Workgroup Software
PRODUCT/INDUSTRY NAMES: 7372690 (Communications Software NEC)
SIC CODES: 7372 Prepackaged software
TICKER SYMBOLS: NSCP
TRADE NAMES: Netscape Communicator (Workgroup software)--Product development
FILE SEGMENT: CD File 275

01775079 SUPPLIER NUMBER: 16778696 (THIS IS THE FULL TEXT)

Sedona room: online tours and 3D spaces. (PC Forum)

REL ease 1.0, v95, n2, p42(3)
Feb 23, 1995
ISSN: 1047-935X LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 1267 LINE COUNT: 00104

TEXT:

One corner of the third Rumpus Room is lined with eight heavily networked workstations for guided tours. These machines, connected to modems and the Forum's LAN, are outfitted with the suite of Internet tools available across the Forum network.sup.2|. In addition, they sport demo accounts on major commercial online services, including AOL, CompuServe, Delphi, Pipeline (now part of PSI) and AT&T's Imagination Network.

Your Rumpus Room tour guides are Jerry Michalski and Judi Clark. Clark is the owner of ManyMedia, an Internet-based Web, graphics and presentation production studio. She often helps companies understand the Internet and implement its technologies. The guides answer questions and suggest places to look. They also have access to a few specialized Internet client applications, such as Mathsoft's MathBrowser, Ubique's Virtual Places client, WAIS's search engine and - if we can get it to work in Phoenix - VocalTec's Internet Phone.

Three of the eight guided-tour workstations are set aside for Forum attendees to show off their sites, tools and Web prowess. Feel free to show others your organization's presence on the Web or its very cool tools (and please be mindful of the time so that others can do the same). Has your family put up a home page? Are you the next John Gage? Did one of your software engineers put something outrageously funny on the Web? Show them off here!

Next to the guided-tour workstations, America Online and Prodigy show some prototype software. AOL has some new Internet services and Prodigy has its Web-oriented, next-generation interface, code-named P2.

Virtual places galore

The rest of the third Rumpus Room is devoted to virtual spaces. Here you can check out snazzy, 3D-environment design tools from Paragraph; realistically rendered, dynamically assembled spaces from the Community Company; an engrossing new 2D multi-user online service called WorldsAway from Fujitsu Cultural Technologies (debuting at the PC Forum); and an interactive, multi-user 3D environment from Knowledge Adventure Worlds. Compare your reactions to the various approaches. Imagine them linked to each other, or to online documents or movies.

ParaGraph is best known in the US for its handwriting-recognition software. Founder and president Stepan Pachikov got drawn into cyberspace by his son, Alex. Of course, their new mutual interest led to a new software product, Alter Ego, which helps even amateur designers develop 3D spaces - then navigate through them. This software is the first step in a larger project to make a software time machine that will allow Pachikov and his son to travel through history.

With Alter Ego's software tools, it's easy to create a room with windows, tables and doors. Developers can add textures or images to any object and set them in motion - the textures, that is. That's how one might create the effect of clouds passing overhead, or a river flowing past one's point of view. One can then steer through the newly constructed virtual space in real-time. Pachikov can also demonstrate movable objects as well as complex spaces with interconnected, complicated rooms.

The Community Company is a recent startup with the goal of fostering virtual communities of three kinds: geographic, demographic and economic. Its founder, Mark Pesce, has been deeply involved in the standards-setting process for a scene-description language for shared 3D virtual spaces. He and others have recently defined the Virtual Reality Modeling Language (VRML; see Release 1.0, 7/8-94). VRML, which uses portions of Silicon Graphics' Open Inventor protocol, is now well positioned to be the base 3D scene-description language for the Internet.

At the PC Forum, the Community Company is introducing freeware VRML browsers that run on Windows, Macintosh (PowerPC and 68K) and SunOS/Motif.sup.3|. (The browsers will be downloadable from http://vrml.wired.com.) In the next couple of months, several large vendors will announce commercial browsers that use the VRML code libraries. As Pesce demonstrates, VRML and HTML documents can interact. You can click on the image of a poster in a 3D room and travel straight to that Web document. Conversely, a Web page could invoke a VRML space.

On the content front, Pesce is involved in projects of the types he wants. A **collaborative** "community **browser** " project should lead to a 3D walkthrough of the South of Market section of San Francisco called "Virtual SoMa". Wired Magazine is converting a section of its Web presence, HotWired, to VRML. Other organizations are interested, too, including the Internet Underground Music Archive and several of the online service providers.

Fujitsu Cultural Technologies debuts its online service, called Worldsaway, at this year's PC Forum. Worldsaway builds on the Habitat system that ran on Commodore 64 micros through America Online's predecessor service, Quantum Communication Services (see Release 1.0, 7-93). Although Habitat ran for only a short while in the US, it has been in use in Japan for a long time on the NiftyServe service.

The new service adopts the best social and graphical concepts of Habitat, but greatly improves the technology. Worldsaway offers a rich, animated 2D environment where people, worldwide, can meet, interact and join together to build virtual communities. Participants can create and control their online identities - called avatars - and portray their real personalities or create totally unique personas.

Avatars can walk, wave, jump, sit, create facial expressions and take part in a variety of activities including social functions, scavenger hunts, and even run their own virtual businesses. Avatars communicate with each other by typing and through actions by gesturing and creating facial expressions. What the users type shows up overhead in color-coded word balloons. Participants can earn or buy tokens and use them to get new paraphernalia for their avatars, decorate their apartment or to access special features, such as a transporter.

The service will be generally available by this fall. Access to Worldsaway is through Compuserve. Participants will log into Compuserve through the Compuserve Information Manager (CIM), then through CIM launch the Worlds-Away application.

Knowledge Adventure Worlds considers itself to be a publisher and packager of 3D, multi-user virtual environments. It has split into commercial and consumer groups since we first wrote about it in Release 1.0, 6-94. Its basic offering is similar to Worldsaway in that multiple avatars can interact in a virtual environment and exchange typed messages. There are several differences: KA Worlds' spaces and avatars are three-dimensional; the spaces can exist as multiple, distributed instances (as opposed to a centralized subscription service); and they work over the Internet. In fact, starting this spring, the client software for some KA Worlds products will be downloadable from the Web http://www.kaworlds.com). Users will then be able to launch the software and participate right away. Other titles will run from CD-ROM, with a connection through the Internet or online services, and will be distributed through traditional channels.

KA Worlds is designing virtual commercial spaces under contract as business applications. The company's San Francisco office expects to unveil an online World Trade Center by the end of the year. It has an Interactive Expo's Fair and other trade shows in the works as well. KA Worlds' first round of financing included an investment from UB Networks, a subsidiary of Tandem Computers.

DESCRIPTORS: Computer Software Industry; Computer Education; Industry Report; Trade Show Report
INDUSTRY CODES: 7372 Prepackaged software; 7375 Information retrieval services
FILE SEGMENT: CD File 275

01375794 Supplier Number: 46343415 (THIS IS THE FULLTEXT)

WEBFLOW ANNOUNCES FIRST WORKGROUP APPLICATION DESIGNED FOR CORPORATE INTRANETS

PR Newswire, p0430SFTU004
April 30, 1996
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1735

TEXT:

SamePage(TM) 'Intranet Work Processor' Provides 'In-Context' **Collaborative** Workspace via Web **Browsers** , Automates Action Item Management

SANTA CLARA, Calif., April 30 /PRNewswire/ -- WebFlow(TM) Corporation today announced the first workgroup application delivered totally through Web browsers that gives corporate Intranet users access to a common workspace for collaborating on documents and projects. Called the SamePage(TM) Intranet Work Processor, the WebFlow application implements a new object-context-rich paradigm for managed collaboration directly inside team shared materials. The industry's first true shrinkwrapped Intranet application, SamePage enables collaborative project management, team document development and review, continuous virtual meetings, and dynamic action item management.

The SamePage Intranet Work Processor is the only workgroup application that enables teams using heterogeneous desktops to work together in a dynamic, shared workspace. Participants collaborate directly inside shared materials, rather than circulating messages about static "attached" documents. SamePage's managed, context-rich approach, with flexible views and alerts, represents a new generation of collaborative applications for comprehensive, concurrent team work.

"WebFlow's development of SamePage takes into consideration the problems inherent in dynamic collaboration and uses open standards to solve them," observed Allen Weiner, Director and Principal Analyst of Online Strategies at Dataquest. "The beauty of SamePage is that it is easy to employ across both small and large organizations and is geared to handle projects of any size. The product has the look and feel of a winner."

"WebFlow is on target for phase two of corporate Intranets, where server-based applications accessed by universal clients drive new frontiers in inter-department collaboration," said Dr. Eric Schmidt, Chief Technology Officer and Corporate Executive Officer at Sun Microsystems. "I am impressed by the design decisions that WebFlow has made in SamePage and am enthusiastic about the natural synergies between their work and ours to create ever more powerful applications for the evolving extended enterprise."

"SamePage transforms everyday activities in corporations, shortening face-to-face meetings and the time to complete team tasks," said David Kenshaw, Vice President of Corporate Marketing at Silicon Graphics, Inc. "With applications like SamePage, the Intranet is fundamentally changing how corporations go about, and now structure, their work."

"Intranets teamed with Web browsers provide the ideal infrastructure for truly open workgroup applications," said Stephen Tolchin, president of WebFlow. "As the first application which leverages that infrastructure to enable cross platform communications and in-context collaboration, SamePage marks a major advance in the evolution of workgroup computing and greatly increases companies' return on investment in their Intranets."

Object-Based Workspace for Efficient Workgroup Discussion and Action

SamePage allows direct, in-context work on virtually any workgroup document or project, including product plans, specifications, work orders, contract negotiations, company initiatives, marketing communications and publicity materials.

The collaborative process begins by launching a standard Web browser pointed to a server hosting the SamePage application. There, teams interactively develop original material or register documents previously created with standard word processors, such as Microsoft Word or Adobe Systems Incorporated's FrameMaker.

SamePage then organizes the material into information objects (such as paragraphs, diagrams, and tables), which the team can then manipulate -- by inserting comments and action items that in themselves become objects for further comment and action in newsgroup fashion. Comments include text, hypertext links to external material, and images. Each SamePage workspace is dynamically assembled using the latest collection of these objects, which can be displayed or hidden to create different views. Once consensus is reached, the work material can be converted to an external file format for printing or publication.

Action Item Management Keeps Workgroups on Track

Through its Take Action!(TM) module, SamePage provides the industry's [illegible] action item management system for managing task assignment among [illegible] teams. Action items can be initiated directly within SamePage work [illegible]. Updates are posted in-line for all to see to promote continuous [illegible]. For management purposes, action items can be sorted and filtered [illegible] different projects in a consolidated action item management system with flexible views -- e.g., sorts by assignee, priority and status (Accepted, Open, Resolved, Closed) -- giving managers and team members the tools they need to keep projects on track.

"Take Action! frees up an enormous amount of time and energy within workgroups, reducing the need for lengthy status updates in meetings," said Richard Rebh, vice president of marketing at WebFlow. "By fostering continuous structured communication among team members, Take Action! allows teams to make progress every day and ensures no action items 'fall through the cracks' due to miscommunication."

Managed Joint Work Process Facilitates Consensus

SamePage creates a workgroup environment in which a joint creative process moves smoothly toward consensus. A workgroup leader can summarize threads of comments, solicit additional comments on specific areas, and iterate the material, including versioning it to a new draft. Different classes of participants can be created; e.g., mandatory sign-off reviewers, optional reviewers, and read-only FYI recipients. All active participants receive e-mail notifications when the material changes, and they can respond back via e-mail; SamePage posts their replies in-line, as if made from a browser. Mandatory reviewers receive reminder notifications if they have not participated by certain dates. Managing the work process in this way, SamePage ensures that all workgroup members are involved, and that they always work with consistent material reflecting the latest thinking [illegible] consensus.

Virtual, 'Asynchronous' Meetings

A unique capability of SamePage is its support for "virtual meetings" in which team members participate, "asynchronously" over an extended period of time. Users can access SamePage whenever they wish, ponder the team's latest thinking about the product or project's status and direction, and post comments iteratively. In this environment, team members have time to reflect on their colleagues' views, and to fully develop their own. "In an asynchronous SamePage meeting, everyone is present, the discussion is managed and coherent, people can contribute when they're ready, and the process moves continuously to a resolution," Rebh said. "By contrast, in face-to-face meetings or teleconferences, key team members can be missing, topics and action items may be forgotten or not dealt with adequately, and the discussion may be dominated by the most articulate people. For these reasons, "synchronous" conference room meetings are often ineffective. SamePage offers the best of both worlds -- the thoroughness of an ongoing discussion and the immediacy and concurrency of an in-person meeting."

Security and Integrity Features

SamePage provides important security and integrity features. A workgroup leader or administrator uses definitions of users, groups, and roles to control access to the workspace and to specify privileges within it. (Examples of roles include job titles, contractor classifications, and outsiders such as suppliers.) All users entering the workspace are authenticated by a password. Public and private groups can be implemented to allow selective participation -- e.g., collaboration with multiple suppliers might entail making some information available to all while hiding each company's direct interaction from the others. SamePage tracks every information object for every user and group, and maintains a full history of all activities in the workspace so that decisions and thought processes at any point in time can be retrieved.

What Users Are Saying

SamePage is currently being incorporated into the work processes of several organizations, including: Sun JavaSoft, Sun SMCC, Silicon Graphics, Cisco Systems, Trancell Systems and a major defense contractor.

"We see SamePage as a central collaboration environment for project management," said David Mosher, head of System Release Management for Sun Microsystems Computer Corporation. "Our pilot project involving SamePage focuses on the management of product definition documents which must be approved by management before a project can be funded. We believe that SamePage's collaboration features will significantly enhance this review process, and that its action item management facility will improve the timeliness of reviews."

"Silicon Graphics has transformed our entire company using our worldwide Intranet," said Darryl Ramm, Technologist in Silicon Graphics' Network Systems Division. "SamePage has allowed us to quickly form virtual teams of sales, marketing, and engineering professionals to coordinate activities for major customer accounts. We piloted SamePage to internally support some of our largest customers in the telecommunications industry. The pay-back was almost immediate. Our customers have already experienced improved quality and response time from us. Improved internal communications using SamePage have also alerted our sales staff to opportunities within our current customers that we may otherwise have been unaware of."

"SamePage is a key enabling technology for managing projects that involve collaboration between our Engineering and Marketing organizations, and coordination with external suppliers, contractors, and service providers," said Mahesh Veerina, CEO of Trancell Systems. "With SamePage, departmental and project workgroups can readily define and track their goals and objectives, create and update status reports, assign and track action items, and work in an environment that is highly dynamic and productive."

System Requirements

SamePage runs on servers under Irix 5.3 and 6.2, Solaris 2.4 and 2.5, and SunOS 4.x, and requires 10MB of memory and 20MB of storage. Client access to SamePage is "universal" (PC, Mac, UNIX) through standard Web browsers, such as Netscape Navigator, Microsoft Internet Explorer, and Mosaic.

Pricing and Availability

SamePage is available immediately, priced at $3,500 for a 10-user system. Volume discounts are available. Evaluation copies are available on CD-ROM, and a demo is accessible on WebFlow's homepage: http://www.webflow.com. The Windows NT and HP UX implementations of SamePage are scheduled in Q3 1996.

About WebFlow

WebFlow Corporation develops and markets state-of-the-art solutions for linking engineering, manufacturing, marketing and sales organizations together within the virtual corporation, and with suppliers and customers in the extended enterprise. Initially, WebFlow is focusing on workgroup management applications that leverage the wide deployment of corporate Intranets and Web browsers to achieve a new collaboration paradigm: concurrent writing into a common workspace accessible by multiple desktop platforms. WebFlow's flagship product, the SamePage Intranet Work Processor, provides a powerful solution for workgroups who need to reach consensus on strategic directions, review in-process materials, manage assigned actions, and track company and product initiatives. Founded in May 1995, WebFlow is privately held and the recipient of equity funding from Bessemer Venture Partners, Draper-Fisher Associates, Information Technology Ventures, Draper-Richards LP, and Sippl Macdonald Ventures.

Advanced Collaboration via the Web

I will first concentrate on the hardest problem in scientific communication. The problem is simple, close, one-to-one, communication between two or more scientists in a tight research collaboration: It is easy to collaborate with somebody who can walk into your office, and work through a problem on a blackboard with you, or who can sit down at a table and circle important points on a research publication. Now put your colleague on the other end of a phone, or e-mail discussion. Any of us who have tried the latter know that things suddenly become very difficult. It is very hard to visualize the fine details of any mathematical science in your head, especially if those details are coming from somebody else's head. Even if one is lucky, and has a copy of a common research paper (maybe sent via electronic mail), it takes a long time to see exactly what point a researcher is looking at. Collaboration becomes much like discussing research with a journal referee--it can be productive, but most time is spent in trying to understand what each other is trying to get at!

We need *visual* input for scientific communication: mathematical sciences are, of course, communicated via mathematics, and our language for mathematics is a highly visual one. A simple equation like

$$g(x) = \int_0^x \left(\frac{f(x,a)^2 \cos(a^3)}{h(x^2,a)\sin(a^4)} \right) da \qquad (1)$$

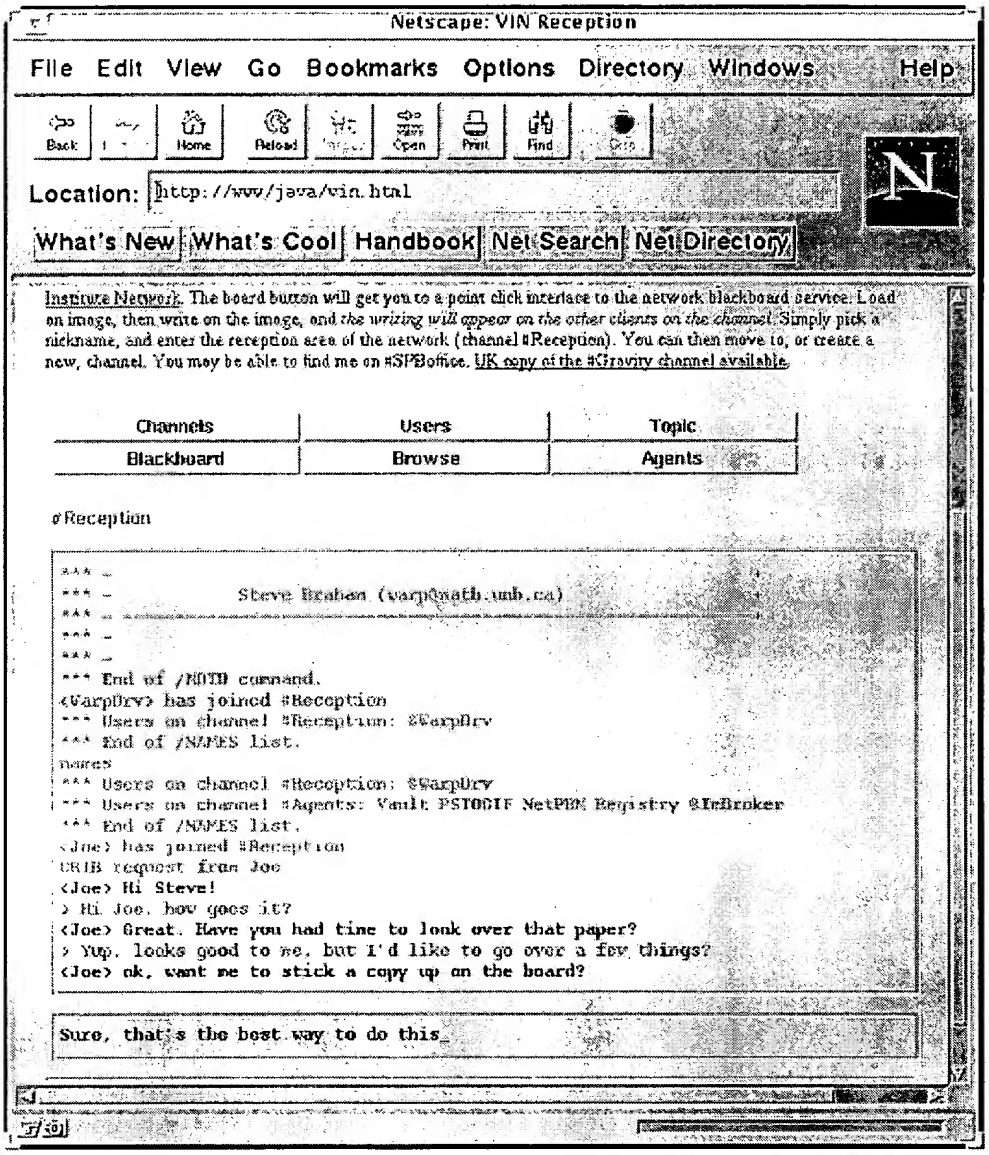
takes a while to explain without vision, but is almost immediately understood when written down. It can then be easily commented on, with a simple circling of a problematic term. This is quite different from most communication outside the mathematical sciences, where points can be argued out in normal spoken language. In this sense, mathematical science communication is far more like discussing art than discussing, say, politics. We thus need our blackboards, or our pieces of paper.

Of course, there are computer systems that provide us with electronic versions of blackboards, and even allow several researchers from anywhere in the world to share those blackboards. The big problem is that the software is highly specialized, and often needs expert installation. It is also, because of that specialization, very difficult to tailor it to exactly the needs of a particular application (for instance, a specific research institute). Not many scientists are willing to take the time to install one copy of a collaborative software system, let alone multiple versions for different applications!

The primary advantage of *Java* is that it actually provides us with a way to make designing collaboration systems easy. Furthermore, it makes it *extremely easy* to use those systems, with almost *no* knowledge of computers. If one has any piece of software written in *Java*, one simply has to put a reference to it in a web page (using an extension to the HTML language). From the point of view of a scientist, by simply viewing that page via an appropriate web browser (like the new version of NetScape), the program is automatically installed onto their computer. Once automatically installed, it starts to run. The scientist does not need to understand how to install it, how to set it up, or even how to start it. That is all done for them by the Web. So, in principle, one can write the software needed for scientific collaboration, place it on a web page, and it is then immediately available for scientists to use: Give your colleague the URL of

the page, and, within minutes, they can be running exactly the same software as you, as long as they know how to use a simple point-and-click browser like NetScape.

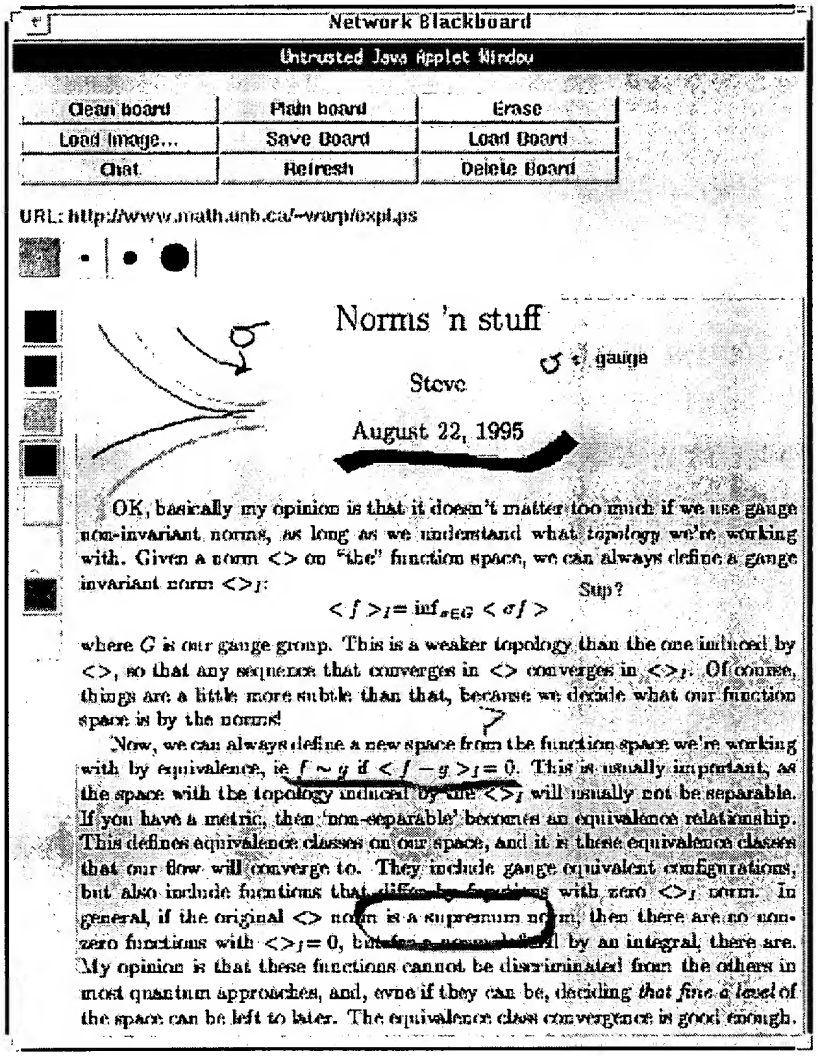
I have actually set up one of these systems, *The Virtual Institute Network* (VIN). VIN has been designed to meet specific needs in a multidisciplinary experimental mathematics collaboration I am involved in, and also to allow fellow general relativity researchers to communicate with me. It provides a simple window, through which users can chat, as can be seen in this image:



The user simply gets to this window by following normal links on the web (see the client itself). It is simply a region in a normal web page, much like an inlined image. Each group of users can form their own channel, thus providing for private discussion groups. It is even possible to have more than one web page containing a connection to VIN, with each page being automatically connected to a different channel. Thus one can direct fellow researchers to a discussion area on a particular field. This has already been done for the General Relativity community, through the international *HyperSpace* web system.

The client uses the power of executable content to make the user interface as natural as possible. Above

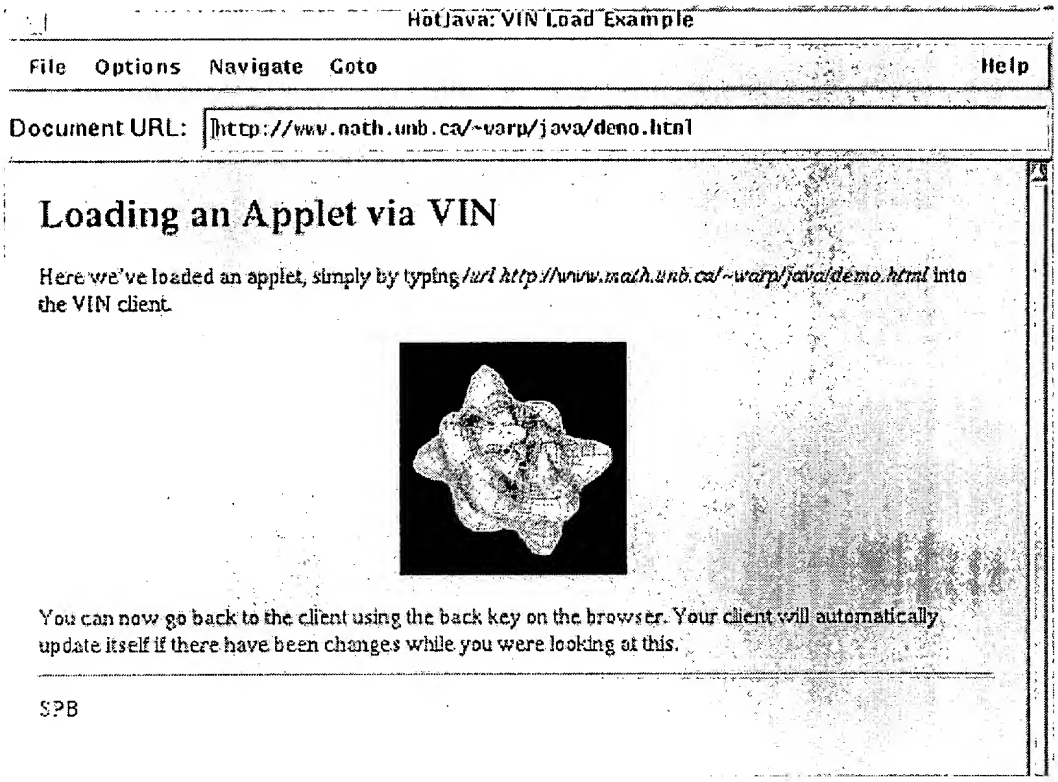
the communication window, he finds a row of buttons that provide, on his own browser, various important functions. These buttons provide a simple interface to the more sophisticated properties of the downloaded *Java* program. The most important is the *Blackboard* button. It starts up the online blackboard, as shown in the next image.



This online blackboard can be used by everybody on the channel. A large range of images can be displayed on it, and those images can then be drawn on. The result is a collaborative annotation system. The simple act of drawing, with the need to constantly interact with the user, and update the screen, is significantly beyond the capabilities of normal server-based programs. The software then provides a mechanism to store the results of the collaboration.

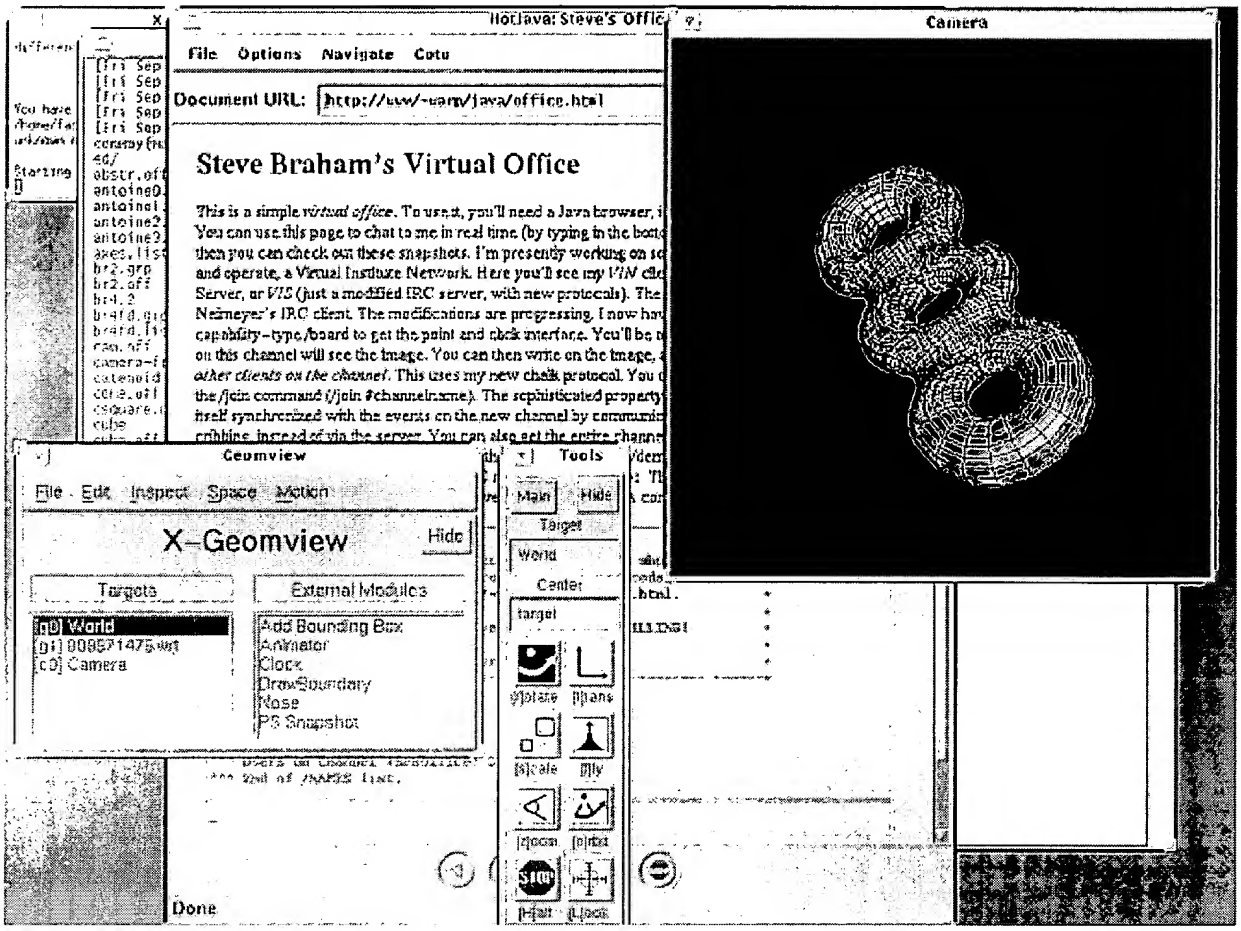
The ease-of-use of VIN is common to executable content systems: a software designer can tailor the application to the users of that application, rather than being confined by the fixed constraints of second-generation, static content, internet services like the pre-*Java* Web. The browser itself is now something that the web programmer can program, and thus the communication between the user and the network, for even the most computer illiterate user, becomes almost unlimited. We have been able to place a piece of data on the network, the information being ``at this location is located a Virtual Institute Network server'' and then, at the same time, have provided the tools needed to connect and use that server. This is an example of a web object.

There is another significant capability of the VIN `client', as it is called: *Java* is a fully web-aware language, and thus is has been easy to program the client to be able to browse the web itself. Simply hitting the *Browse* button, and typing in a URL, allows *any web document* to be brought up on the computers of all the researchers collaborating on the channel. Thus the VIN client itself is a full, collaborative, web browser. Users of the system are not restricted to using just the capabilities programmed into the client by me, but any capability available on the web, including other *Java* applications. For instance, the next image is a picture taken of a *moving animation* generated, via a different program, using *Java*, simply displayed on the channel (with an earlier version of the software).



Notice that, here, we are displaying data in a way that does not have a corresponding protocol defined on the web: there is a well-defined protocol for images on a web page, but not for animations. Without executable content, one is forced to bring up the animation using a helper application. Once more, the animation is a web object, stored as a group of images, and a tool for displaying those images.

The *browse* button can also bring up other helper applications, if they are available to the specialists on the channel, for instance, *Geomview*, as shown in the next image:



I would again stress that `installing' this software is as easy as visiting a certain web page. The VIN client then immediately starts up, independent of whether the user is looking at the page with a fully-equipped Sun workstation, or a basic Windows 95 PC, or another computer using the latest version of NetScape. It can be seen, therefore, that third-generation web pages with executable content provides a greatly expanded capability over simple web pages containing second-generation static web information.

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Stephen Braham
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